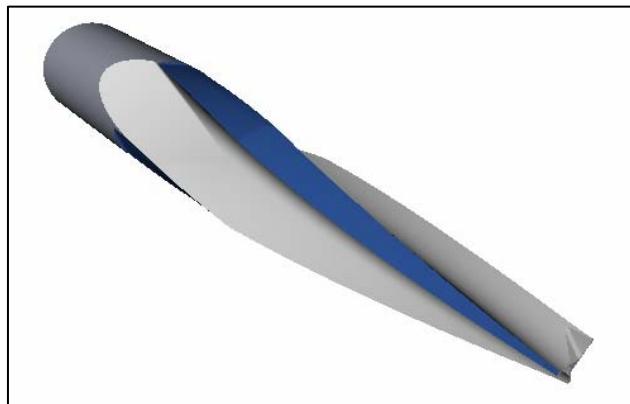


Reamer Ø10.5 Z3

A01-010

If starting from a blank diameter 12 mm or higher a cutting operation is necessary to bring the blank to the specified diameter .

Grinding the conical part of the reamer entirely and solely with a chamfer operation is not possible due to the considerable amount of material to be ground off the blank. A flute operation with the wheel defined in the middle and with a flute number not less than 6 is then necessary to rough the blank with the desired conus angle.



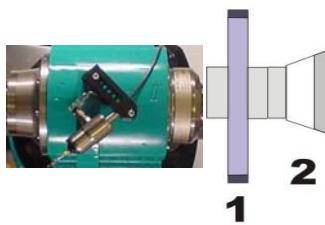
1. Cycletime for Production

Workpiece:	Diameter 10.5 mm, Z 3, Length of cutting edge 42.5 mm, Helix angle 10° Material: CARBIDE						
Operations	Probe	Cutting	(Conus Roughing)	Flute 1	Flute 2	O.D.1	Chamfer
Feed [mm/Min]	2000	40	40	80	80	400	100
Power [kW]		7	9	9	4	4	4
Cutting feed [m/s]		22	22	22	22	22	22
Used wheels		1	1	1	1	2	2
Grinding time [s]	6	749	299	69	36	66	53
Total cycle time	21 Min 18						

The cycle times are indicative. Material to be ground, grinding wheels, coolants can influence the cycle times considerably.

2. Used Grinding Wheels

1	1A1 Ø125 B91
2	11V9 Ø75 B106



3. Machine and Software Requirements

Machines: 5 axes CNC grinders : NORMA CFG

Coolant: Synthetic Oil, pressure 6 bar

Control: Fanuc 160i

Software: Quinto 5

Accessories:

Responsable engineer: SBA 16.11.2009

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